No. 7800103

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Royal Sluis B.V.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF seventeen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BEAN

'Smilo'

PLANT VARIETY PROTECTION OFFICE · AGRICULTURAL MARKETING SERVICE · DEPARTMENT OF AGRICULTURE

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington *this* 1st *day of* May *in the year of our Lord one thousand nine hundred and* eighty.

Attest:

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Secretary of Agriculture

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: *See Reverse.*

FORM APPROVED
OMB NO. 40-R3822

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY	1b. VARIETY NAME	FOR OFFICIAL USE ONLY
SMILO	SMILO	PV NUMBER 7800103
2. KIND NAME: Dwarf snap bean	3. GENUS AND SPECIES NAME: Phaseolus vulgaris	FILING DATE 6-6-78 / TIME 10:00 A.M. P.M.
4. FAMILY NAME (BOTANICAL): Leguminosa	5. DATE OF DETERMINATION: October 1974	FEE RECEIVED $500.00 / $250.00 / DATE 6-6-78 / 2-22-80

6. NAME OF APPLICANT(S)	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*	8. TELEPHONE AREA CODE AND NUMBER
Royal Sluis, Koninklijke Zaaizaadbedrijven Gebroeders Sluis B.V.,	161 Westeinde, P.O. Box 22 1600 AA ENKHUIZEN The Netherlands	02280-2741

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)*	10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION	11. DATE OF INCORPORATION
association	-	-

12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: J. Sluis , Royal Sluis B.V., P.O. Box 22, 1600 AA ENKHUIZEN, The Netherlands

13. **CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:**

- [x] 13A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*
- [x] 13B. Exhibit B, Novelty Statement.
- [x] 13C. Exhibit C, Objective Description of the Variety *(Request form from Plant Variety Protection Office.)*
- [x] 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See Section 83(a). (If "Yes," answer 14B and 14C below.)* [ ] YES [x] NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?	14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED?
[ ] YES [x] NO	[ ] FOUNDATION [ ] REGISTERED [ ] CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? [x] YES [ ] NO *(If "Yes," give name of countries and dates.)*

The Netherlands 15th November 1976
Germany 8th November 1977
France 17th December 1976
The United Kingdom 6th Jan.1978

15b. ~~HAVE RIGHTS BEEN GRANTED~~ THIS VARIETY IN OTHER COUNTRIES? [ ] YES [x] NO *(If "Yes," give name of countries and dates.)*

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? [x] YES [ ] NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

29th May 1978
(DATE)

R. SLUIS
Koninklijke Zaaizaadbedrijven Gebroeders Sluis B.V.
(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

INSTRUCTIONS

GENERAL: Send an original copy of the application and exhibits, at least 2,500 viable seeds, and $500 fee ($250 filing fee and $250 examination fee) to U.S. Dept. of Agriculture, Agricultural Marketing Service, Livestock, Poultry, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

5 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.

13a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.

13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.

13c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.

13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as, plant habit, plant color, disease resistance, etc.

14a If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "NO," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)

15a See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.

Dwarf French Beans SMILO

13 B Exhibit B Novelty Statement

SMILO differs significantly from the current bean varieties on the American market in that this variety has a much compacter growing habit. The pods are slim and rather short. The variety is used for whole canning or freezing.

13 D Exhibit D, Botanical description of SMILO

SMILO is a green podded dwarf snap bean, round podded and stringless.

The vine is quite compact and comparisons can only be made with European varieties. The pods are dark green and rather small.

13 A Exhibit A

Pedigree: Tendercrop x own parent lines.

SMILO has been derived from several backcrosses of our parent lines to achieve resistance to Anthracnose and to arrive at the desired plant type.

The backcross method of breeding was used for the last several generations line selection has been carried out. Disease resistance testing was carried out before multiplication of elite seeds.

SMILO has showed to be stable and uniform through several generations of selfing. Flat podded off-types appear approximately 1 : 10,000.

DWARF FRENCH BEANS "SMILO"

13 B Exhibit B Novelty Statement

"Smilo" is most similar to Simplobel, but the growing habit is more compact, and Smilo's pods are more briljant and exactly round.
Smilo is resistant to common mosaic virus, while Simplobel is not.
Smilo matured 2 days earlier than Simplobel on our trial field.
The seed colour of Smilo is green, while Simplobel is white.

13 D Exhibit D Additional Description

"Smilo" is a dark green podded dwarf snap bean, stringless.
The pods are round and small as compared to the American varieties, and have a briljant dark green colour, with a colour value of 143 C *; like Simplobel, on our trial field in Enkhuizen - Holland.

* Royal Horticultural Society Colour Chart

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-12
(11-15-72)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

EXHIBIT C
(Bean)

OBJECTIVE DESCRIPTION OF VARIETY

BEAN (*PHALEOLUS VULGARIS*)

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
ROYAL SLUIS

ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*
Koninklijke Zaaizaadbedrijven Gebroeders
Sluis B.V., Westeinde 161,
P.O.Box 22, 1600 AA ENKHUIZEN, The Netherlands

FOR OFFICIAL USE ONLY

PVPO NUMBER
7800103

VARIETY NAME OR TEMPORARY DESIGNATION
Smilo

Jet 791287

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. TYPE:

[1] 1 = SNAPBEAN 2 = GREEN SHELL 3 = DRY EDIBLE 4 = MULTIPURPOSE

2. SEASON AND REGION OF ADAPTABILITY IN THE U.S.:

[2] Grows best during: 1 = SPRING 2 = SUMMER 3 = FALL 4 = WINTER

[6] Best adapted in: 1 = NORTHWEST 2 = NORTHCENTRAL 3 = NORTHEAST 4 = SOUTHEAST 5 = SOUTHWEST 6 = MOST REGIONS

3. MATURITY ***(Days from seeding to first harvest):***

[7][6] GREEN PODS [ ][ ] GREEN SHELLS [9][5] DRY SEEDS

[0][2] NO. DAYS EARLIER THAN ---------- [7]
[0][6] NO. DAYS LATER THAN ---------- [8]

1 = TENDERCROP 2 = KENTUCKY WONDER 3 = KINGHORN WAX
4 = WHITE KIDNEY 5 = MICHELITE 62 6 = DWARF HORTICULTURAL
7 = BUSH BLUE LAKE 8 = OTHER *(Specify)* Slenderwhite

4. PLANT:

[1] 1 = DETERMINATE, ERECT BUSH 2 = DETERMINATE, SPRAWLING BUSH 3 = DETERMINATE, SEMIPOLE 4 = INDETERMINATE, POLE

[0][3][5] CM. HEIGHT OR LENGTH OF VINE FROM PRIMARY LEAF NODE

[0][1][2] NUMBER PRIMARY BRANCHES PER MAIN STALK

[2][8] CM. SPREAD

[1] Branching habit: 1 = COMPACT 2 = OPEN

[ ][ ] NUMBER INTERNODES ON MAIN STALK BETWEEN PRIMARY LEAF AND BASE OF TERMINAL INFLORESCENCE

[0][5] CM. LENGTH OF FIRST INTERNODE ABOVE PRIMARY LEAF

[0][5] MM. STALK DIAMETER ABOVE FIRST TRIFOLIATE LEAF

[2] Main stalk: 1 = BRITTLE 2 = WIREY [1] 1. STOUT 2. THIN

[2] Flower position:
[2] Pod Position:
1 = LOW, CONCENTRATED 2 = HIGH, CONCENTRATED 3 = SCATTERED

5. LEAVES:

[1] 1 = SMOOTH 2 = WRINKLED [2] 1 = DULL 2 = GLOSSY [2] Thickness: 1 = THIN 2 = MEDIUM 3 = THICK

[1] Size: 1 = SMALL *(Earliwax)* 2 = MEDIUM 3 = LARGE *(Tendercrop)* [7] CM. PETIOLE LENGTH *(To basal leaflets of first trifoliate leaf)*

[3] Tip shape of center leaflet: 1 = ROUNDED 2 = TAPER POINTED 3 = SHARP POINTED

[2] PUBESCENCE - Dorsal:
[2] PUBESCENCE - Ventral:
1 = NONE 2 = SLIGHT 3 = CONSIDERABLE

[2] Color: 1 = LIGHT GREEN *(Bountiful)* 2 = MEDIUM GREEN 3 = DARK GREEN *(Bush Blue Lake)*

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6. FLOWERS:

[1] Color: 1 = WHITE 2 = CREAM 3 = PINK 4 = LILAC 5 = PURPLE
6 = OTHER (Specify)_____

[2] Racemes: 1 = LONG 2 = MEDIUM 3 = SHORT [10] NUMBER FLOWERS PER RACEME

7. FRESH PODS: (Edible maturity, averages for 10 pods)

3 [2] Color: 1 = LIGHT GREEN (Bountiful) 2 = MEDIUM GREEN (Tendergreen) 3 = DARK GREEN (Wade)
4 = LIGHT YELLOW (Brittlewax) 5 = GOLDEN YELLOW (Cherokee Wax) 6 = GREEN-RED VARIAGATED (Horticultural)
7 = OTHER (Specify) _____

[1 0] CM. LENGTH [0 8] MM. WIDTH (Between sutures) [0 8] MM. THICKNESS [1 0] WIDTH / THICKNESS X 10

[4] Cross section pod shape: 1 = FLAT 2 = OVAL 3 = CREASEBACK 4 = ROUND

[1] Curvature: 1 = STRAIGHT 2 = SLIGHTLY CURVED 3 = CURVED

[1] Pubescence: 1 = NONE 2 = SPARSE 3 = CONSIDERABLE

[1] Constrictions: 1 = NONE 2 = SLIGHT 3 = DEEP

[2] Spur: 1 = STRAIGHT 2 = SLIGHTLY CURVED 3 = CURVED

[1] Surface: 1 = SHINY 2 = DULL

[1] Surface: 1 = SMOOTH 2 = BLISTERED

[2] Pod flesh: 1 = LIGHT 2 = DARK

[1] Pod flesh: 1 = FIRM 2 = WATERY

[8] MM. SPUR LENGTH

[2] Suture string: 1 = PRESENT 2 = ABSENT

[1] Fiber: 1 = NONE 2 = SPARSE 3 = CONSIDERABLE

[1] Seed development: 1 = SLOW 2 = MEDIUM 3 = FAST

[6] NUMBER OF SEEDS PER POD

[21] NUMBER PODS PER PLANT (Once over harvest)

[13] NUMBER MARKETABLE PODS PER PLANT (Once over harvest)

[1] Machine harvest: 1 = ADAPTED 2 = NOT ADAPTED

8. SEED COAT COLOR:

[1] 1 = MONOCHROME 2 = POLYCHROME

[1] 1 = SHINY 2 = DULL

[1] Primary color: 1 = WHITE 2 = YELLOW 3 = BUFF 4 = TAN
[1] Secondary color: 5 = BROWN 6 = PINK 7 = RED 8 = PURPLE
9 = BLUE 10 = BLACK 11 = OTHER (Specify)_____

[0] Color pattern: 1 = SPLASHED 2 = MOTTLED 3 = STRIPED 4 = FLECKED 5 = DOTTED

[0] Secondary color location: 1 = HILAR RING 2 = HILAR SURFACE 3 = STROPHIOLE 4 = MICROPYLE 5 = SIDES 6 = DORSAL SURFACE 7 = NOT RESTRICTED TO ANY AREA 8 = COMBINATION OF LOCATIONS (Specify)_____

[1] Hilar ring: 1 = NOT PRESENT 2 = NARROW 3 = BUTTERFLY SHAPED

[2] Vein-like under coat pattern: 1 = ABSENT 2 = PRESENT

9. SEED SHAPE AND SIZE:

[1] Hilum view: 1 = ELLIPTICAL 2 = OVAL 3 = ROUND

[1] Side view: 1 = OVAL 2 = ROUND 3 = KIDNEY 4 = TRUNCATE ENDS

[4] Cross section: 1 = ELLIPTICAL 2 = OVAL 3 = CORDATE 4 = ROUND

[17] GM. WEIGHT PER 100 SEEDS

[2] Classification: 1 = PEA 2 = MEDIUM 3 = MARROW 4 = KIDNEY 5 = PINTO

[0 5] MM. WIDTH (Dorsal to ventral) [0 5] MM. THICKNESS (Side to side)

[1 0] MM. LENGTH [0 1 0] WIDTH / THICKNESS X 10

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10. ANTHOCYANIN: *(1 = Absent 2 = Present):*

[1] FLOWERS [1] STEMS [1] PODS [1] SEEDS [1] LEAVES

11. DISEASE RESISTANCE *(0 = Not tested; 1 = Susceptible; 2 = Resistant):*

[0]	RUST *(Specify race)* _____	[0]	ANGULAR LEAF SPOT
[1]	BACTERIAL WILT	[2]	COMMON BEAN MOSAIC
[2]	ANTHRACNOSE	[0]	YELLOW BEAN MOSAIC
[0]	SOUTHERN BEAN MOSAIC	[0]	FUSARIUM ROOT ROT
[0]	CURLY TOP	[0]	N.Y. 15 BEAN MOSAIC
[0]	POWDERY MILDEW	[0]	BEAN MOSAIC VIRUS 4
[0]	HALO BLIGHT	[0]	FUSCOUS BLIGHT
[0]	ALFALFA MOSAIC VIRUS	[0]	ALFALFA MOSAIC VIRUS 2
[0]	POD MOTTLE VIRUS	[0]	RED NODE VIRUS
[0]	ROOT KNOT NEMATODE	[0]	OTHER *(Specify)* _____

12. INSECT RESISTANCE: *(0 = Not tested; 1 = Susceptible; 2 = Resistant)*

[0]	APHIDS	[0]	LEAF HOPPERS
[0]	POD BORER	[0]	LYGUS
[0]	THRIPS	[0]	WEAVILS
[0]	SEED CORN MAGGOT	[0]	OTHER *(Specify)* _____

13. PHYSIOLOGICAL RESISTANCE: *(0 = Not tested; 1 = Susceptible; 2 = Resistant)*

[2] HEAT [1] COLD [2] DROUGHT [0] OTHER *(Specify)* _____

REFERENCES: The following publications may be used as a reference in completing this form:

1. Beans of New York. Vol. 1 Part II of Vegetables of New York. U.P. Hedrick et al. J. B. Lyon Company, Albany, N.Y. 1931.

2. Yarnell, S. H., Cytogenetics of the Vegetable Crops IV. Legumes. Bot. Rev. 31:247 - 330. 1965.

3. USDA Yearbook of Agriculture. 1937.

COLOR: Nickerson's or any recognized color fan may be used to determine the colors.